Claims

1. A cross-connector for optical signals (S1, S2, ...), having N inputs and P outputs (N>1, P>1),
characterized in that
the optical signals (S1, S2, ...) have time-division multiplexed channels and are fed in each instance to an optical switch (OS1, OS2, ...) with an optical combiner (OK1, OK2, ...) connected downstream,
at the first optical switch (OS1) a first number (J) of channels (AS1) branched from the first optical signal (S1) are fed to the second optical combiner (OK2) and at the second optical switch (OS2) a second number (L) of channels (AS2) branched from the second optical signal (S2) are fed to the first optical combiner (OK1) and
the optical switches (OS1, OS2) are controlled by optical control signals (KS1, KS2).

2. The cross-connector as claimed in claim 1,
characterized in that
the optical combiners (OK1, OK2) have a detection unit to determine the occupancy of incoming time-division multiplexed channels and means for reciprocal time displacement or reassignment of channels.

3. The cross-connector as claimed in one of the preceding claims,
characterized in that
delay elements (D1, D2) are arranged between the optical switches (OS1, OS2) and the optical combiners (OK1, OK2), being connected to a control facility (PULSTRAIN1-CON, PULSTRAIN2-CON) and allowing time synchronization of the time-division

multiplex signals.

4. The cross-connector as claimed in one of the preceding claims,
characterized in that
the addition or branching of channels in the non-demultiplexed time-division multiplex signal is controlled by means of a sequence of pulses as control signals (KS1, KS2).

5. The cross-connector as claimed in one of the preceding claims,
characterized in that
the control signals (KS1, KS2), as output signals of at least one pulse source (PULS), have pulse sequences, the maximum bit rate of which is the bit rate of the time-division multiplex signals (s1, S2).

6. The cross-connector as claimed in one of the preceding claims,
characterized in that
a splitter (S) is provided to generate control signals, splitting a pulse signal (OI), which has a basic data rate of the time-division multiplex signal, into a number of sub-pulses (TI1, TI2, ...),
one of the sub-pulses (TI1, TI2, ...) is fed in each instance to a number of transit time elements (T),
the transit time elements (T) have transit times that differ by a whole number multiple of a bit duration,
an optical switch (MZ1) is arranged in series with each transmit time element (T),
a combiner (K) is connected downstream from the optical switches (MZI1, MZI2, ...) and combines the delayed sub-pulses

(TI1, TI2, ...) to form control signals (KS1, KS2).

7. An arrangement as claimed in claim 6, characterized in that Mach-Zehnder interferometers combined with photodiodes are provided as optical switches (MZI1, MZI2, ...) such that the addition, branching or time displacement of data of one of the time-division multiplexed channels of the time-division multiplex signal is carried out as a channel-related operation.